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Positron annihilation study of the juniperus communis based biomaterial NEFROVIL

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Abstract

© Springer Science+Business Media Dordrecht 2015. he results of positron annihilation lifetime (PAL) measurements of the Juniperus communis based biomaterial NEFROVIL are reported for the first time. Three- and four-component fittings were applied to deconvolute the PAL spectrum. In order to determine which fitting procedure is most suited, a maximum entropy lifetime (MELT) analysis was also performed. It was found that the nanovoid topology of this biomaterial is constructed by small and large free-volume holes identified by the ortho-positronium lifetime parameters in the most suitable fourcomponent fitting procedure.

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Keywords

Biomaterial, Nanovoids, Positron annihilation, Positronium